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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/713,036	11/17/2003	Hideo Hagiwara	511.33114CC6	1139

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ANTONELLI, TERRY, STOUT & KRAUS, LLP
1300 NORTH SEVENTEENTH STREET
SUITE 1800
ARLINGTON, VA 22209-3873

EXAMINER

CHU, JOHN S Y

ART UNIT PAPER NUMBER

1752

DATE MAILED: 08/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/713,036

Applicant(s)

HAGIWARA ET AL.

Examiner

John S. Chu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3,4,10-13,17 and 19-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 23 is/are allowed.
- 6) ☒ Claim(s) 3,4,10-13,17 and 19-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

This Office action is in response to the amendment received May 31, 2005.

1. The rejection under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-11, 14-21, 24, and 28 of U.S. Patent No. 5,856,059 is **withdrawn** in view of the proper Terminal disclaimer filed.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

3. Claims 3, 4, 10-13, 17, 19-22 and 24, 25 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by HAGIWARA ET AL.

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10. (Currently amended) A photosensitive resin composition which ~~comprises~~ consists essentially of (1) a polyimide precursor produced using (a) an oxydiphthalic acid or acid anhydride thereof as a reactant for forming the polyimide precursor, and (b) at least one diamine selected from the group consisting of diaminodiphenyl ether, diaminodiphenyl sulfone, metaphenylene diamine, p-phenylenediamine, p-xylylenediamine, diaminonaphthalene, dimethylbenzidine, dimethoxybenzidine, diaminodiphenylmethane, diaminodiphenylsulfide, benzophenonediamine, bis((aminophenoxy) phenyl)sulfone, hexafluoro-bis(aminophenyl)propane, bis((aminophenoxy)phenyl)propane, dimethyl-diaminophenyl-methane, tetramethyl-diaminodiphenylmethane, bis((aminophenoxy)phenyl) sulfone, bis(aminophenyl)propane and diaminopolysiloxane, (2) an addition-polymerizable compound, and (3) a photoinitiator, and which is adapted to be exposed and developed using an i-line stepper which uses monochromatic light, the polyimide precursor being such that a 20 µm thick film thereof has a transmittance, at 365nm, of at least 40%.

HAGIWARA ET AL anticipates the claimed invention at Examples 2, 3, 6, 8, 9, 13 and 14, found in Table 1 of column 52, lines 12-46. The polyimide precursor polymers as seen in the examples above include those disclosed in Synthesis Examples 7, 8, 11, 13, 14, 18 and 19. The polyamic acid is a condensation product of an oxyphthalic acid and 4,4'-diamino diphenyl ether wherein the polyamic acid is in a composition with a polymerizable unsaturated compound known as tetraethylene glycol diacrylate (A-4G) and a photoinitiator of 4,6 dimethyl-7-ethylaminocourmarin.

Any objective evidence presented in the case measuring the transmittance under the same circumstances showing a different transmittance may serve as evidence to overcome the rejection under 35U.S.C. 102(e). The examiner further notes the arguments by applicant wherein applicants have asserted that the current application to 10/713036 is commonly owned by Hitachi Chemical Co., Ltd, which would disqualify the U.S. Patent No. 5,472,823 a prior art

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under 35 U.S.C. 103, with respect to the presently claimed subject matter. The examiner notes this argument, however the current rejection is under 35 U.S.C. 102(e) which is not disqualified even if the application and the prior art are commonly owned. Here the invention is to another and is clearly anticipated by the prior art working example and is properly rejectable under 35 U.S.C. 102(e).

The arguments by applicant have been carefully considered along with the amendment reciting “consisting essentially of” language. The rejection is repeated based on the transition phrase “consisting essentially of” following the term “composition, which”, thus the scope is interpreted to mean that only the listed components are present in the composition within the art recognized definition of “consisting essentially of”. The polyimide precursor continues to be met by the prior art wherein the component of formula 1 as stated in HAGIWARA et al falls within the claimed scope of ingredient (1) of claim 1. The amendment fails to exclude the prior art diamine as now recited. Claim 14 rejected in the previous Office action is a typographical error, since the claim was not pending and was a cancelled claim, therefore the intended claim should have been 17 which has been corrected above.

Claims 3, 12, 19 and 20 have been included in the current rejection, and accordingly the rejection is not made Final based on those claims not previously being rejected over HAGIWARA et al ‘823.

4. Claim 25 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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HAGIWARA et al fails to anticipate the claimed diamines as recited in claim 25. In addition no obviousness rejection can be made using HAGIWARA et al because it is commonly owned with the current application.

5. Claim 23 remains allowed.

None of the prior art references disclose the use of a hydroxyl containing diamine used to make a polyimide precursor in a negative working composition with an addition-polymerizable compound and a photoinitiator coated at a thickness of 20 μ m and has a transmittance, at 365 nm of at least 40%.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Chu whose telephone number is (571) 272-1329. The examiner can normally be reached on Monday - Friday from 9:30 am to 6:00 pm.

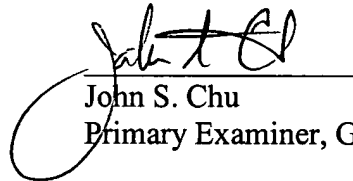
The fax phone number for the USPTO is (703) 872-9306. **On July 15, 2005 applicants should begin sending correspondence to the new USPTO Central fax phone number at 571-273-8300. Applicants can still use the old fax number until September 15, 2005 at which time the old fax number will no longer be operational.**

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-1700.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PMR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



John S. Chu
Primary Examiner, Group 1700

J.Chu
August 18, 2005